

HYDRATED LIME FOR PLASTER

Fibered Base Coat Finishing Hydrated Lime

White Finishing Hydrated Lime

From Northwestern Ohio

Up to about 1890 and for centuries preceding, virtually all plaster and exterior stucco were composed of lime and sand and practically all early masonry was laid up in lime mortar. These plasters, stuccos and mortars were not made with the modern hydrated lime obtainable today but from locally calcined lump lime. Qualities varied, naturally, depending on the quality of limestone, shells, etc., from which the lime was obtained, but even so the results were uniformly satisfactory as attested by buildings which have stood the test of time, even in this country, for hundreds of years.

The basic reason for these uniformly satisfactory results was that the old time masons and plasterers used only thoroughly age-slaked lime putty. They slaked their lump lime and stored the lime putty for months in ground pits before it was used. As the aged lime putty was removed from the pit, section by section, it was replaced with freshly slaked lime putty and this new section in turn was aged before removal for use.

This ageing of the slaked lump lime putty, obviously was time consuming—too time consuming to meet modern speeds of construction. Thus there came into general use substitutes.

Today, however, finishing hydrated lime from Ohio is marketed nationally, pre-slaked ready, but for a moderate soaking period, for immediate use. FINISHING HYDRATED LIME is completely mill manufactured under chemical supervision and control—a standardized, uniform modern basic material. Hydrated lime putty has all of the best characteristics of the old, aged-in-the-pit lump lime putty with the advantage of being "Ready for Use".

Now there is marketed nationally, "Ready to Use" Fibered Hydrated Lime made from the famous Ohio Finishing Limes designed for plaster base coats as well as Hydrated Finishing Lime, universally recognized as the best finishing coat material.

Comparatively recent research, likewise, has proved conclusively the many advantages of Finishing Hydrated Lime mortar for masonry.

Thus Lime, tested by time, used through the ages, meets the challenge of modern construction.



St. James Goose Creek Church is located about twenty miles from Charleston, S. C. Built of Lime Stucco and Lime Plaster in 1713, it is an excellent example of the permanence and lasting qualities of Lime for Stucco and Plaster. It is perhaps the oldest and best preserved church in this section of the country.

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THE FINISHING LIME ASSOCIATION OF OHIO

601-2-3 Home Bank Building—Toledo 4, Ohio

MILL MIXED FIBERED FINISHING HYDRATED LIME PLASTER

The manufacturers of the famous Finishing Hydrated Limes from Ohio are experiencing an increased demand for a mill-mixed base coat lime plaster. This is the result of Architects and Plastering Contractors finding, after careful investigation and successful use in many buildings, large and small, that lime plaster gives them and their clients the utmost satisfaction. Mill Fibered Hydrated Lime plaster is now produced commercially in quantity production and is available for distribution through the warehouses of all building supply dealers.

THE PRODUCT—The Plaster is basically a Finishing Hydrated Lime, embracing all of the characteristics of strength, uniformity, plasticity or workability, and cool-working qualities that have given Finishing Hydrated Lime recognition as a superior plastering lime. It is completely manufactured at the mill under chemical supervision and control, mixed with the proper amounts of finest-quality hair and fiber in correct proportions, and delivered at the job in the original packages, ready for use.

PREPARATION AND USE—All that is necessary to prepare fibered hydrated lime plaster for use is to soak it over-night, mix it with sand in the proper proportions, and apply; or mortar may be mixed and stacked for four or five days prior to use, thus effecting an economy and increasing the plasticity.

WHERE TO PURCHASE—Fibered Hydrated Lime can be ordered through any builders' supply dealer in the same manner in which Finishing Hydrated

Lime is purchased. It is obtainable in mixed cars with Finishing Hydrated Lime.

ADVANTAGES—(1) The product may be retempered and due to its setting properties plasterers are able to execute true and straight walls, ceilings, and angles.

(2) This lime plaster may be applied over metal lath, wood lath, clay masonry walls, concrete, gypsum block and gypsum perforated lath. Its flexibility as to plaster base makes it possible to gain the higher insulating values of lime plaster without using several different plastering and wall finishing materials.

(3) It protects metal lath, pipes and other metal construction with which it comes in contact from oxidation and corrosion.

(4) Condensation from pipes and metal in the wall will not affect it as moisture has no effect on lime plaster except to harden it. It is especially adaptable in areas of high humidity and areas adjacent to bodies of water and for use in steam rooms, bath rooms, laundries and structures of similar nature.

(5) It permits the development of wall decoration such as frescoing (Letter Circular 304 of the Bureau of Standards).

(6) It is adaptable to decoration by water-color without impairing the sound reduction factor.

Specifications FOR INTERIOR PLASTER

MATERIALS

FINISHING HYDRATED LIME—All lime for finish coats shall be Finishing Hydrated Lime meeting the requirements of the American Society of Testing Materials, and THE FINISHING LIME ASSOCIATION OF OHIO, delivered at the job in original packages. All lime for base coats shall be a mixture of finishing hydrated lime, hair and/or fiber, mill mixed and delivered in the original packages.

SAND—(a) Sand for scratch and brown coats shall meet the requirements of the tentative specifications for sand for lime plaster of the American Society for Testing Materials.

(b) Sand for sand finish shall be a clean, dry screened sand 100% passing a No. 10 mesh screen, unless otherwise specified for specific finishes.

(c) Colored screenings and marble dust may be used to obtain color shades.

GAUGING MATERIALS—(a) Plaster of paris shall be clean, fresh and fully calcined, meeting the specifications of the American Society for Testing Materials.

(b) When Keene's cement is used it shall be a standard brand

meeting the specifications of the American Society for Testing Materials.

(c) When portland cement is used it shall be a standard brand meeting the specifications of the American Society for Testing Materials and the Portland Cement Association.

WATER—Water shall be clean and fit for domestic consumption.

METAL LATH—All expanded and fabricated lath shall be of an approved brand, applied in accordance with recommendations of the manufacturers.

WOOD LATH—Wood lath shall be No. 1 White Pine or equal and should be as damp as practicable when mortar is applied. Courses should be broken every eighth course, and all lath laid horizontally and in one direction on ceilings. They shall be nailed securely with 3d nails to each support, and shall cross and have butt joints over a support. Lath shall be spaced $\frac{3}{8}$ in. apart. Provide and securely place metal corner beads and metal lath strips in all exterior and interior angles.

GROUND WORK—Grounds shall be placed and secured prior to the application of plaster. Wood lath and metal lath shall have $\frac{3}{4}$ -in. or $\frac{7}{8}$ -in. grounds. Solid backings shall have $\frac{5}{8}$ -in. grounds.

FIBERED BASE COATS

PLASTERING ON CONCRETE SURFACES

CEILINGS—Proportions: Stiff putty, 1 part by volume; fine plaster sand, 2½ parts by volume.

Prepare ceiling by brushing or washing free from scale dust, dirt, oil, etc., and then slush down with neat portland cement as a primer or by hacking and roughing surface prepare bond to receive plaster. When this is set, apply coat as thin as possible. (If plain surface is required, it should be obtained through good form-work. Do not attempt to fill up uneven places with plaster.) Trowel to finish or texture desired. If white coat is desired, add finely screened sand to regular white coat.

WALLS—5/8-in. grounds. Proportions: Stiff putty, 1 part by volume; plaster sand, 3 parts by volume.

Brush or wash surface free from all dirt scale, or foreign matter, and then slush down with neat cement, or by hacking and roughing surface prepare bond to receive plaster. When this is dry apply 1 coat of this mortar and by adding 1 more part of sand, apply a second coat, and bring out to grounds. Use rod and darby to bring to even surface. When firm but not dry, rub evenly with float to remove and prevent shrinkage cracks, and prepare surface to receive finish coat. When thoroughly dry apply finish coat.

NOTE: We do not believe the application of plaster to concrete surfaces is satisfactory, and therefore we recommend that all such concrete surfaces be furred and lathed.

THREE-COAT WORK ON METAL LATH

MORTAR—The mortar shall be a mixture of Finishing Hydrated Lime paste or putty, which has been allowed to age either neat or sanded for at least 24 hours, in the following proportions:

PROPORTIONS—Scratch coat shall be composed of: Stiff putty made from fibered lime, 1 part by volume; plastering sand dry, 3 parts by volume.

Brown coat shall be: Stiff putty, 1 part by volume; plastering sand dry, 4 parts by volume.

APPLICATION—(a) Plastering shall be to 7/8-in. grounds.

(b) Apply a coat of scratch mortar evenly and with sufficient force to insure clinch and key.

(c) As soon as this coat has become firm but not dry, scratch entire surface with broom or metal scratcher to insure bond for brown coat.

(d) When scratch coat has become dry apply brown coat, and bring surface out to grounds. Rod and darby to true surface and when this coat is firm but not dry, rub evenly with float to eliminate and prevent shrinkage cracks, and to prepare surface to receive finish coat.

Gauging—If a harder set is desired, 15% to 20% of portland or Keene's cement by weight of lime may be gauged in the scratch coat.

Putty made from Finishing Hydrated Lime shall be soaked 24 hours. This is done by sifting Finishing Hydrated Lime into a tank or box of clear water.

WHITE SMOOTH FINISH—Thoroughly mix gauging and Finishing Hydrated Lime putty and apply evenly. Trowel to eliminate all checks, chip cracks and uneven points to a true and even surface.

Proportion—Finishing Hydrated Lime, 4 sacks, 200 lb.; plaster of paris, 50 lb.

TEXTURED WHITE FINISH—Thoroughly mix gauging and Finishing Hydrated Lime putty and apply a very thin coat completely covering the brown coat. Follow this with heavier coat to form texture desired.

Proportions—Finishing Hydrated Lime, 3 sacks, 150 lb.; plaster of paris, 50 lb.

THREE-COAT WORK ON WOOD LATH

MORTAR—The mortar shall be a mixture of Finishing Hydrated Lime, paste or putty, which has been allowed to age either neat or sanded for at least 24 hours, in the following proportions:

PROPORTIONS—Scratch coat shall be composed of: Stiff putty made from fibered Finishing Hydrated Lime, 1 part by volume; plastering sand dry, 3 parts by volume. Brown coat shall be: Stiff putty made from fibered Finishing Hydrated Lime, 1 part by volume; plastering sand dry, 4 parts by volume.

APPLICATION — (a) Plastering shall be applied to 7/8-in. grounds.

(b) Apply a coat of scratch mortar evenly and with sufficient force to insure good clinch and key.

(c) As soon as scratch coat has become firm but not dry, scratch entire surface with broom or metal scratcher to insure bond for brown coat.

(d) When scratch coat is dry apply brown coat, brought out to grounds. Rod and darby to true surface and when this coat is firm but not dry, rub evenly with float to eliminate and prevent shrinkage cracks, and prepare surface for finish coat.

Gauging—If a harder set is desired, 15% to 20% of portland or Keene's cement by weight of lime may be gauged in the scratch coat.

TWO-COAT WORK ON BRICK, TILE, GYPSUM BLOCK, ETC. (Doubled-up Work)

MORTAR—The mortar shall be a mixture of Finishing Hydrated Lime, paste or putty, which has been allowed to age, either neat or sanded for at least 24 hours, in the following proportions:

PROPORTIONS—Scratch coat shall be composed of: Stiff putty made from fibered lime, 1 part by volume; plastering sand dry, 3½ parts by volume.

APPLICATION — (a) Plastering shall be applied to 5/8-in. grounds.

(b) All surfaces of tile, etc., shall be free from oil, dirt, dust or other foreign matter, and should be wet down before applying plaster.

(c) Apply a coat of this mortar with sufficient pressure to insure bond, and double back with the same mortar, bringing the coat out to grounds; rod and darby to true even surface.

(d) When surface is firm, but not dry, rub evenly with float to eliminate and prevent shrinkage cracks, and to prepare surface to receive finish coat.

(e) When the base coat plaster is thoroughly dry, after preparation as above, apply finish coat.

FINISH COATS

SAND FINISH—Mix Finishing Hydrated Lime and sand dry and screen through No. 10 screen unless specified for specific finishes, and add water and mix to proper consistency.

Apply a thin coat to all mortar surfaces, and double back with same mixture and float to true plane surface.

Proportions—Finishing Hydrated Lime, 2 sacks, 100 lb.; plastering sand, 300 lb.

Note: Keene's cement, portland cement or highly retarded gypsum may be added to sand finish as a hardener in proportions of 10% to 30% of the entire mixture.

TEXTURE FINISH—Finish in same manner as sand finish, except second coat is applied heavier, and texture desired worked in with tools or hands.

How to prepare **HYDRATED LIME FOR PLASTER**



Type of mixing box and screen.



Sack is broken open on screen.



The lime sifted through screen into water.

FINISHING HYDRATED LIME—In order that the full advantages are obtained, Finishing Hydrated lime should be properly prepared for use by soaking in water for twenty-four hours preparatory to using.

The soaking in order to obtain the best results should be carried on as follows: A box is filled with clean water and the lime is sifted into the water thru a coarse screen and allowed to settle under its own weight until the box is filled. It is then left for twenty-four hours to develop plasticity.

Care should be taken not to force lime into water by poking or puddling with paddle.

By carefully following the instructions a maximum amount of hodable putty is obtained with a maximum spreadability or workability. No slaking boxes or aging vats are necessary, the soaking box with coarse screen are the only equipment needed.

In a multiple storied building the Finishing Hydrated Lime can be stored on each floor in sufficient quantities to plaster the floor and soaked the day before using.

FIBERED FINISHING HYDRATED LIME BASE COATS—To soak the Mill Fibered Hydrated Lime Base Coat preparatory for use, it is necessary to soak this without screening it into the water. This is usually accomplished by filling the tank half full of water and dumping the fibred lime into it, and letting it stand for 24 hours.

Another satisfactory method is to fill the tank full of dry mill mixed fibred lime and in one corner of the tank place vertically a four or six inch pipe, slotted at the bottom. After the tank is filled with the dry lime; a hose is inserted into the pipe to the bottom of the tank and the water turned on. In this way, the water enters the tank at the bottom of the lime and slowly rises until the lime is thoroly soaked.

Many plastering contractors have found it economical to machine mix the base coat material. The fibred lime and sand are placed in the mixer, water is added and the whole batch thoroughly machine mixed. This mortar is then stacked for four or five days or a week before use to develop plasticity.

The Ohio Hydrate & Supply Company, Woodville, Ohio

The Gibsonburg Lime Products Company, Gibsonburg, Ohio

The Woodville Lime Products Co., 2140 Jefferson Ave., Toledo 2, Ohio

THE FINISHING LIME ASSOCIATION OF OHIO

601-2-3 Home Bank Building — Toledo 4, Ohio

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